

UK Design Flood Estimation

Generated on 05 May 2021 08:45:56 by User

Printed from the ReFH2 Flood Modelling software package, version 3.1.7439.12207

Summary of estimate using the Flood Estimation Handbook revitalised flood hydrograph method (ReFH2)

Site details

Checksum: C338-6498

Site name: FEH_Point_Descriptors_588788_217031

Easting: 588788

Northing: 217031

Country: England, Wales or Northern Ireland

Catchment Area (km²): 0.02

Using plot scale calculations: Yes

Model: ReFH2.3

Site description: None

Model run: 30 year

Summary of results

Rainfall - FEH 2013 model (mm):	48.74	Total runoff (ML):	0.25
Total Rainfall (mm):	31.22	Total flow (ML):	0.67
Peak Rainfall (mm):	7.09	Peak flow (m ³ /s):	0.01

Parameters

Where the user has overridden a system-generated value, this original value is shown in square brackets after the value used.

* Indicates that the user locked the duration/timestep

Rainfall parameters (Rainfall - FEH 2013 model)

Name	Value	User-defined?
Duration (hh:mm:ss)	05:30:00	No
Timestep (hh:mm:ss)	00:30:00	No
SCF (Seasonal correction factor)	0.64	No
ARF (Areal reduction factor)	0.99	No
Seasonality	Winter	No

Loss model parameters

Name	Value	User-defined?
Cini (mm)	119.46	No
Cmax (mm)	357.53	No
Use alpha correction factor	No	No
Alpha correction factor	n/a	No

Routing model parameters

Name	Value	User-defined?
Tp (hr)	3.25 [1.34]	Yes
Up	0.65	No
Uk	0.8	No

Baseflow model parameters

Name	Value	User-defined?
BFO (m ³ /s)	0	No
BL (hr)	38.89 [32.37]	Yes
BR	1.65	No

Urbanisation parameters

Name	Value	User-defined?
Urban area (km ²)	0	No
Urbext 2000	0	No
Impervious runoff factor	0.7	No
Imperviousness factor	0.4	No
Tp scaling factor	0.75	No
Depression storage depth (mm)	0.5	No
Exporting drained area (km ²)	0.00	Yes
Sewer capacity (m ³ /s)	0.00	Yes

Time series data

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
00:00:00	0.6854	0.0000	0.2297	0.0000	0.000658	0.000658
00:30:00	1.1483	0.0000	0.3877	0.0000	0.000649	0.00067
01:00:00	1.9138	0.0000	0.6544	0.0001	0.000642	0.000741
01:30:00	3.1644	0.0000	1.1045	0.0003	0.000638	0.00091
02:00:00	5.1498	0.0000	1.8573	0.0006	0.000639	0.00124
02:30:00	7.0941	0.0000	2.6800	0.0012	0.00065	0.00186
03:00:00	5.1498	0.0000	2.0337	0.0022	0.000678	0.00291
03:30:00	3.1644	0.0000	1.2864	0.0037	0.000732	0.00441
04:00:00	1.9138	0.0000	0.7916	0.0054	0.000817	0.00618
04:30:00	1.1483	0.0000	0.4799	0.0071	0.000938	0.00806
05:00:00	0.6854	0.0000	0.2882	0.0088	0.00109	0.00989
05:30:00	0.0000	0.0000	0.0000	0.0102	0.00128	0.0115
06:00:00	0.0000	0.0000	0.0000	0.0111	0.00149	0.0126
06:30:00	0.0000	0.0000	0.0000	0.0113	0.0017	0.013
07:00:00	0.0000	0.0000	0.0000	0.0109	0.00192	0.0128
07:30:00	0.0000	0.0000	0.0000	0.0101	0.00211	0.0122
08:00:00	0.0000	0.0000	0.0000	0.0091	0.00229	0.0114
08:30:00	0.0000	0.0000	0.0000	0.0081	0.00244	0.0105
09:00:00	0.0000	0.0000	0.0000	0.0070	0.00257	0.0096
09:30:00	0.0000	0.0000	0.0000	0.0061	0.00267	0.00877
10:00:00	0.0000	0.0000	0.0000	0.0053	0.00276	0.00806
10:30:00	0.0000	0.0000	0.0000	0.0046	0.00283	0.00744
11:00:00	0.0000	0.0000	0.0000	0.0040	0.00288	0.00686
11:30:00	0.0000	0.0000	0.0000	0.0034	0.00292	0.00631
12:00:00	0.0000	0.0000	0.0000	0.0028	0.00295	0.00577
12:30:00	0.0000	0.0000	0.0000	0.0023	0.00297	0.00524
13:00:00	0.0000	0.0000	0.0000	0.0017	0.00297	0.00472
13:30:00	0.0000	0.0000	0.0000	0.0013	0.00296	0.00422
14:00:00	0.0000	0.0000	0.0000	0.0008	0.00295	0.00376
14:30:00	0.0000	0.0000	0.0000	0.0005	0.00292	0.0034
15:00:00	0.0000	0.0000	0.0000	0.0003	0.0029	0.00315
15:30:00	0.0000	0.0000	0.0000	0.0001	0.00286	0.00298
16:00:00	0.0000	0.0000	0.0000	0.0000	0.00283	0.00288
16:30:00	0.0000	0.0000	0.0000	0.0000	0.00279	0.00281
17:00:00	0.0000	0.0000	0.0000	0.0000	0.00276	0.00276

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
17:30:00	0.0000	0.0000	0.0000	0.0000	0.00272	0.00272
18:00:00	0.0000	0.0000	0.0000	0.0000	0.00269	0.00269
18:30:00	0.0000	0.0000	0.0000	0.0000	0.00265	0.00265
19:00:00	0.0000	0.0000	0.0000	0.0000	0.00262	0.00262
19:30:00	0.0000	0.0000	0.0000	0.0000	0.00258	0.00258
20:00:00	0.0000	0.0000	0.0000	0.0000	0.00255	0.00255
20:30:00	0.0000	0.0000	0.0000	0.0000	0.00252	0.00252
21:00:00	0.0000	0.0000	0.0000	0.0000	0.00249	0.00249
21:30:00	0.0000	0.0000	0.0000	0.0000	0.00245	0.00245
22:00:00	0.0000	0.0000	0.0000	0.0000	0.00242	0.00242
22:30:00	0.0000	0.0000	0.0000	0.0000	0.00239	0.00239
23:00:00	0.0000	0.0000	0.0000	0.0000	0.00236	0.00236
23:30:00	0.0000	0.0000	0.0000	0.0000	0.00233	0.00233
24:00:00	0.0000	0.0000	0.0000	0.0000	0.0023	0.0023
24:30:00	0.0000	0.0000	0.0000	0.0000	0.00227	0.00227
25:00:00	0.0000	0.0000	0.0000	0.0000	0.00224	0.00224
25:30:00	0.0000	0.0000	0.0000	0.0000	0.00221	0.00221
26:00:00	0.0000	0.0000	0.0000	0.0000	0.00219	0.00219
26:30:00	0.0000	0.0000	0.0000	0.0000	0.00216	0.00216
27:00:00	0.0000	0.0000	0.0000	0.0000	0.00213	0.00213
27:30:00	0.0000	0.0000	0.0000	0.0000	0.0021	0.0021
28:00:00	0.0000	0.0000	0.0000	0.0000	0.00208	0.00208
28:30:00	0.0000	0.0000	0.0000	0.0000	0.00205	0.00205
29:00:00	0.0000	0.0000	0.0000	0.0000	0.00202	0.00202
29:30:00	0.0000	0.0000	0.0000	0.0000	0.002	0.002
30:00:00	0.0000	0.0000	0.0000	0.0000	0.00197	0.00197
30:30:00	0.0000	0.0000	0.0000	0.0000	0.00195	0.00195
31:00:00	0.0000	0.0000	0.0000	0.0000	0.00192	0.00192
31:30:00	0.0000	0.0000	0.0000	0.0000	0.0019	0.0019
32:00:00	0.0000	0.0000	0.0000	0.0000	0.00187	0.00187
32:30:00	0.0000	0.0000	0.0000	0.0000	0.00185	0.00185
33:00:00	0.0000	0.0000	0.0000	0.0000	0.00183	0.00183
33:30:00	0.0000	0.0000	0.0000	0.0000	0.0018	0.0018
34:00:00	0.0000	0.0000	0.0000	0.0000	0.00178	0.00178
34:30:00	0.0000	0.0000	0.0000	0.0000	0.00176	0.00176
35:00:00	0.0000	0.0000	0.0000	0.0000	0.00173	0.00173

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
35:30:00	0.0000	0.0000	0.0000	0.0000	0.00171	0.00171
36:00:00	0.0000	0.0000	0.0000	0.0000	0.00169	0.00169
36:30:00	0.0000	0.0000	0.0000	0.0000	0.00167	0.00167
37:00:00	0.0000	0.0000	0.0000	0.0000	0.00165	0.00165
37:30:00	0.0000	0.0000	0.0000	0.0000	0.00163	0.00163
38:00:00	0.0000	0.0000	0.0000	0.0000	0.00161	0.00161
38:30:00	0.0000	0.0000	0.0000	0.0000	0.00159	0.00159
39:00:00	0.0000	0.0000	0.0000	0.0000	0.00157	0.00157
39:30:00	0.0000	0.0000	0.0000	0.0000	0.00155	0.00155
40:00:00	0.0000	0.0000	0.0000	0.0000	0.00153	0.00153
40:30:00	0.0000	0.0000	0.0000	0.0000	0.00151	0.00151
41:00:00	0.0000	0.0000	0.0000	0.0000	0.00149	0.00149
41:30:00	0.0000	0.0000	0.0000	0.0000	0.00147	0.00147
42:00:00	0.0000	0.0000	0.0000	0.0000	0.00145	0.00145
42:30:00	0.0000	0.0000	0.0000	0.0000	0.00143	0.00143
43:00:00	0.0000	0.0000	0.0000	0.0000	0.00141	0.00141
43:30:00	0.0000	0.0000	0.0000	0.0000	0.00139	0.00139
44:00:00	0.0000	0.0000	0.0000	0.0000	0.00138	0.00138
44:30:00	0.0000	0.0000	0.0000	0.0000	0.00136	0.00136
45:00:00	0.0000	0.0000	0.0000	0.0000	0.00134	0.00134
45:30:00	0.0000	0.0000	0.0000	0.0000	0.00132	0.00132
46:00:00	0.0000	0.0000	0.0000	0.0000	0.00131	0.00131
46:30:00	0.0000	0.0000	0.0000	0.0000	0.00129	0.00129
47:00:00	0.0000	0.0000	0.0000	0.0000	0.00127	0.00127
47:30:00	0.0000	0.0000	0.0000	0.0000	0.00126	0.00126
48:00:00	0.0000	0.0000	0.0000	0.0000	0.00124	0.00124
48:30:00	0.0000	0.0000	0.0000	0.0000	0.00123	0.00123
49:00:00	0.0000	0.0000	0.0000	0.0000	0.00121	0.00121
49:30:00	0.0000	0.0000	0.0000	0.0000	0.00119	0.00119
50:00:00	0.0000	0.0000	0.0000	0.0000	0.00118	0.00118
50:30:00	0.0000	0.0000	0.0000	0.0000	0.00116	0.00116
51:00:00	0.0000	0.0000	0.0000	0.0000	0.00115	0.00115
51:30:00	0.0000	0.0000	0.0000	0.0000	0.00113	0.00113
52:00:00	0.0000	0.0000	0.0000	0.0000	0.00112	0.00112
52:30:00	0.0000	0.0000	0.0000	0.0000	0.00111	0.00111
53:00:00	0.0000	0.0000	0.0000	0.0000	0.00109	0.00109

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
53:30:00	0.0000	0.0000	0.0000	0.0000	0.00108	0.00108
54:00:00	0.0000	0.0000	0.0000	0.0000	0.00106	0.00106
54:30:00	0.0000	0.0000	0.0000	0.0000	0.00105	0.00105
55:00:00	0.0000	0.0000	0.0000	0.0000	0.00104	0.00104
55:30:00	0.0000	0.0000	0.0000	0.0000	0.00102	0.00102
56:00:00	0.0000	0.0000	0.0000	0.0000	0.00101	0.00101
56:30:00	0.0000	0.0000	0.0000	0.0000	0.000998	0.000998
57:00:00	0.0000	0.0000	0.0000	0.0000	0.000985	0.000985
57:30:00	0.0000	0.0000	0.0000	0.0000	0.000973	0.000973
58:00:00	0.0000	0.0000	0.0000	0.0000	0.00096	0.00096
58:30:00	0.0000	0.0000	0.0000	0.0000	0.000948	0.000948
59:00:00	0.0000	0.0000	0.0000	0.0000	0.000936	0.000936
59:30:00	0.0000	0.0000	0.0000	0.0000	0.000924	0.000924
60:00:00	0.0000	0.0000	0.0000	0.0000	0.000912	0.000912
60:30:00	0.0000	0.0000	0.0000	0.0000	0.0009	0.0009
61:00:00	0.0000	0.0000	0.0000	0.0000	0.000889	0.000889
61:30:00	0.0000	0.0000	0.0000	0.0000	0.000878	0.000878
62:00:00	0.0000	0.0000	0.0000	0.0000	0.000866	0.000866
62:30:00	0.0000	0.0000	0.0000	0.0000	0.000855	0.000855
63:00:00	0.0000	0.0000	0.0000	0.0000	0.000844	0.000844
63:30:00	0.0000	0.0000	0.0000	0.0000	0.000834	0.000834
64:00:00	0.0000	0.0000	0.0000	0.0000	0.000823	0.000823
64:30:00	0.0000	0.0000	0.0000	0.0000	0.000812	0.000812
65:00:00	0.0000	0.0000	0.0000	0.0000	0.000802	0.000802
65:30:00	0.0000	0.0000	0.0000	0.0000	0.000792	0.000792
66:00:00	0.0000	0.0000	0.0000	0.0000	0.000782	0.000782
66:30:00	0.0000	0.0000	0.0000	0.0000	0.000772	0.000772
67:00:00	0.0000	0.0000	0.0000	0.0000	0.000762	0.000762
67:30:00	0.0000	0.0000	0.0000	0.0000	0.000752	0.000752
68:00:00	0.0000	0.0000	0.0000	0.0000	0.000743	0.000743
68:30:00	0.0000	0.0000	0.0000	0.0000	0.000733	0.000733
69:00:00	0.0000	0.0000	0.0000	0.0000	0.000724	0.000724
69:30:00	0.0000	0.0000	0.0000	0.0000	0.000714	0.000714
70:00:00	0.0000	0.0000	0.0000	0.0000	0.000705	0.000705
70:30:00	0.0000	0.0000	0.0000	0.0000	0.000696	0.000696
71:00:00	0.0000	0.0000	0.0000	0.0000	0.000687	0.000687

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m ³ /s)	Baseflow (m ³ /s)	Total Flow (m ³ /s)
71:30:00	0.0000	0.0000	0.0000	0.0000	0.000679	0.000679
72:00:00	0.0000	0.0000	0.0000	0.0000	0.00067	0.00067
72:30:00	0.0000	0.0000	0.0000	0.0000	0.000661	0.000661

Appendix

Catchment descriptors

Name	Value	User-defined value used?
BFIHOST	0.38	No
BFIHOST19	0.42	No
PROPWET (mm)	0.23	No
SAAR (mm)	569	No